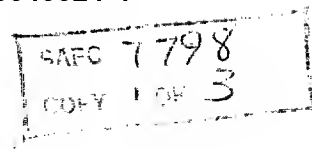


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21 June 1956

orig - [redacted] 25X1A  
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 cy 3 - Staff Elit Officer [redacted] 25X1A

CMCC Doc. No. 151X5.150  
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Dear Dick:

During the course of development of System No. 3, certain additions to the work originally contemplated were made as a result of conferences with your technical representatives which resulted in the expenditure of a fairly substantial amount of engineering effort. The attached statement of work indicates the nature of the engineering effort which was not covered by the basic System 3 proposal. You are familiar, I am sure, with the nature and results of some of the work already performed; in particular, you will recall that considerable effort was expended in devising a method for compression in time of the data recorded by System 3. This work progressed through the development of compression-system concepts, the logical design of circuits and mechanisms for accomplishing the compression, and the structure of many of the basically new circuits required to accomplish the over-all objective. For reasons having to do with the ultimate utilization of System 3 records, this work was suspended at the request of your representatives on November 23, 1955. Other items of additional work performed are perhaps somewhat less familiar to you because they related more to detailed technical considerations than to technical matters having a close tie-in with operational considerations. Among these items, however, are included those relating to provision for reception of both frequency-modulated and amplitude-modulated signals, and the provision of a notch filter to attenuate intercepted signal audio components which would tend to interfere with definition of the 1-kc timing signal recorded on one of the three channels of the System 3 tape recorder. A related requirement to add the 1 kc timing signal to the recorded data required redesign of a sweep-circuit assembly. Altogether, these and allied problems of a technical character have resulted in the utilization of approximately 1400 hours of engineering labor and typically related amounts of engineering allied labor.

The attached cost estimate for the additional work performed has been based upon records of work assignments by the project super-

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[redacted]  
 receipt of your authorization, in the form of a suitable contract amendment, to permit this expenditure as an allowable item of project cost.

## Enclosures:

CMCC No. 1131X5.19,  
 Copies 1, 2\*, 3 of 4  
 CMCC No. 1132X5.12,  
 Copies 1, 2\*, 3 of 4

Sincerely,

*Dean*  
 Dean

DOCUMENT NO. 22  
 SECURITY CLASS. X  
 UNCLASSIFIED  
 DATE 13/1/81 BY 241  
 REVIEWED 010956

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CMCC Doc. No. 1131X5.19

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## STATEMENT OF WORK

Additional costs have been and are being incurred due to requirements which have been added to System Three over and above those requirements established in the original proposal, upon which the present contract is based. The contractor proposes to supply the following services, equipment and supplies:

1. Junction box, which provides control and fusing of input power to System Three, and provides a central junction for System Three cabling. This junction box contains d-c circuit breakers, a-c fuses, on-off relay, time-reference tone relay, and five inter-cabling plugs.
2. Provide for simultaneous reception of narrow band FM signals and AM signals. This requires minor redesign of the i-f assembly layout.
3. 1-kc notch filter, used to attenuate the frequency components in the region of 1-kc contained in the audio signals recorded on channel three of the magnetic tape of System Three.
4. Redesign of sweep assembly necessitated by the requirement to add the 1-kc timing signal to the recorded data. Specifically, the original pulse train carrying frequency information consisted of rectangular pulses of three milliseconds duration. Since these pulses saturated the tape, the added 1-kc timing signal could not be read through the pulses; and, hence, these pulses had to be replaced with short pulses. In addition, the reference pulse also required shortening. These changes required the addition of several stages of pulse circuitry.
5. Research and development for the purpose of effecting a time compression of the data recorded by System Three. This work consisted of the devising of a block diagram and detailed circuits, as well as bread-boarding of the circuitry. This work was suspended at the request of the contracting agency on November 23, 1955.

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1 March 1956

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Dear George:

We are submitting herewith our proposal covering production of System No. 3 equipment. This proposal includes a Technical Exhibit describing the receivers to be produced, a Statement of Work, a Delivery Schedule, and a Summary of Estimated Costs covering the production of six System No. 3 airborne receivers plus spare parts equivalent to three additional receivers, nine sets of cabling, three preflight test sets, and 25 copies of an instruction manual for the equipment.

We assume that the airborne recorders required with System No. 3 will be available from the quantities which have already been supplied to you under an earlier procurement. We assume also that Kelly's people will fabricate and install to our specifications the aircraft antenna required for System No. 3.

The Delivery Schedule submitted is believed to represent the best delivery that can be realized in view of the heavy engineering and production program under way on System No. 2. There exists a small probability that some deviation from the schedule proposed may be required to ensure the overriding priority of System No. 2 deliveries.

We have assumed that delivery of six operational receivers plus spare parts equivalent to three additional receivers, and three preflight test sets, will meet your needs. If your review of the over-all operational requirements suggests that the number of receivers, spare units, or test sets is either too great or too small, we ask that you feel free to alter the numbers suggested in this proposal and to apply the unit cost figures indicated in our attached Estimate of Production Costs to determine a revised total cost figure.

We understand acceptance of this proposal is contingent upon successful completion of flight tests on the System No. 3 prototype.

Sincerely,

  
Dean

## Enclosures:

CMCC No. 1133.7,  
Copies 1-6 of 10CMCC 1131X5.1,  
Copies 1-3 of 4CMCC No. 1131X5.2,  
Copies 1-3 of 4CMCC No. 1132X5.1,  
Copies 1-3 of 4**SECRET**

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CMCC Doc. No. 1131X5-1

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1 March 1956

## STATEMENT OF WORK

The contractor proposes to provide:

1. All engineering, labor, supplies, and materials necessary for the fabrication, testing, and delivery of the following System No. 3 electronic equipment as described in the accompanying technical exhibit:
  - a. Six airborne receivers.
  - b. Spare parts equivalent to three additional airborne receivers.
  - c. Nine sets of cabling necessary for installation of the equipment in the aircraft.
  - d. Three preflight test sets designed to permit ground performance tests on the system.
2. All engineering, labor, supplies, and materials necessary for preparation and delivery of 25 copies of a manual describing the principles of operation of the system and its components, instructions for installation of the equipment, and instructions for the testing and maintenance of the equipment with the aid of the preflight test set provided. A complete listing of parts and assignment of maintenance part numbers will be included.

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### DELIVERY SCHEDULE

1. Delivery of the first and second complete systems, plus one complete set of spare parts and one test set, will be made on 1 June 1956.
2. Delivery of the third and fourth systems, plus the second complete set of spare parts and one test set, will be made on or before 15 July 1956.
3. Delivery of the fifth and sixth systems, plus the third set of spare parts and one test set, will be made on or before 1 September 1956.
4. Delivery of 25 copies of the manual will be made on 1 June 1956.

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